IN THE CLAIMS

Please amend claims 28, 30, 31, 33, 34, 36 and 38 and cancel claim 29 in accordance with the following listing showing the status of all claims in the application.

1. (Original) A method for fabricating a variable-buoyancy structure in the water, comprising the steps of:

(a) obtaining a floatable platform that is disposed in the water in a buoyant state,

(i) wherein the floatable platform has a variable buoyancy that ranges from positive to negative buoyancy,

(ii) wherein the floatable platform includes a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure, and

(iii) wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors,

(b) installing an air line system that connects the inlet/outlet openings to at least one exterior access point, wherein said inlet/outlet openings are externally controllable;

(c) filling the mold with a construction material, in a liquid or semi-liquid state, so as to form the variable-buoyancy structure, with the at least one exterior access point still accessible;

(d) causing the construction material to at least partially harden into a form defined by the mold; and

(e) submerging the floatable platform,

wherein subsequent to or concurrently with step (e), air trapped in the structural cells after closing the at least one exterior access point causes the variable-buoyancy structure to float and separate from the floatable platform.

2. (Original) A method according to claim 1, wherein the construction material comprises concrete.

3. (Original) A method according to claim 1, further comprising a step of inserting a reinforcing structure into the mold prior to filling the mold in step (c).

4. (Original) A method according to claim 1, wherein trapped air in the structural cells causes the variable-buoyancy structure to float as soon as the floatable platform is submerged in step (e).

5. (Original) A method according to claim 4, wherein an opening in each forming cell causes any air trapped in said each forming cell to transfer into a corresponding structural cell when the platform is submerged.

6. (Original) A method according to claim 1, wherein the variable-buoyancy structure submerges with the floatable platform in step (e), and further comprising a step of subsequently pumping air into the at least one exterior access point in order to trap the air in the structural cells and thereby cause the variable-buoyancy structure to float and separate from the platform.

7. (Original) A method according to claim 1, further comprising a step of towing the variable-buoyancy structure in its floating state to a use site and a step of submerging the variable-buoyancy structure at the use site by opening the at least one exterior access point.

8. (Original) A method according to claim 7, further comprising a step of installing a wave shield underneath the variable-buoyancy structure prior to towing the variable-buoyancy structure to the use site and a step of removing the wave shield prior to submerging the variable-buoyancy structure at the use site.

9. (Original) A method according to claim 1, further comprising steps of installing an air line that extends from the at least one exterior access point to a buoyant object and maintaining the air line in place after submerging the variable-buoyancy structure.

10. (Original) A method according to claim 9, wherein the at least one exterior access point includes a connector for detachably attaching the air line.

11. (Original) A method according to claim 1, wherein the construction material is significantly denser than water.

12. (Original) A method according to claim 1, further comprising a step of placing a waterproof liner over each forming cell prior to filling the mold with construction material in step (c).

13. (Original) A method according to claim 12, wherein the waterproof liner includes a plurality of outwardly projecting spurs.

14. (Original) A method according to claim 1, wherein the forming cells are modular, permitting custom-sizing of the mold and, accordingly, the variable-buoyancy structure.

15. (Original) A method according to claim 1, wherein each inlet/outlet opening is at the top of its corresponding structural cell.

16. (Original) A method according to claim 1, wherein the mold provides the variable-buoyancy structure with a laterally extending shoulder around the periphery of the variable-buoyancy structure.

17. (Original) A method according to claim 1, further comprising a step of providing ballast tanks around the periphery of the variable-buoyancy structure.

18. (Original) A method according to claim 1, wherein the variable-buoyancy structure includes tapered projections that extend downwardly beneath the bottom of the structural cells, said projections being disposed near an outer edge of the variable-buoyancy structure.

19. (Original) A method according to claim 1, wherein each forming cell includes a bottom opening for admitting air and a top opening for transferring any air trapped in said each forming cell to a corresponding structural cell when the platform is submerged.

20. (Original) A method according to claim 1, further comprising a step of detaching the sidewall from the floatable platform prior to submerging the floatable platform in step (e).

21. (Original) A method according to claim 1, wherein the sidewall is hinged to the platform, and further comprising a step of pulling the sidewall away from the sides of the variable-buoyancy structure prior to submerging the floatable platform in step (e).

22. (Original) A method according to claim 1, wherein both the forming cells and the structural cells are arranged in an array.

23. (Original) A method according to claim 1, further comprising a step of inserting a container into at least some of the structural cells.

24. (Original) A method according to claim 23, wherein the container comprises a collapsible sack.

25. (Original) A method according to claim 23, wherein the container comprises a rigid chamber.

26. (Original) A method according to claim 25, wherein the container is the forming cell and adheres to the construction material when the platform is separated from the variable-buoyancy structure.

27. (Original) A method according to claim 1, further comprising a step of inserting a positive buoyancy element into at least some of the structural cells.

28. (Currently Amended) A platform for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure,

wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein the forming cells are modular, permitting custom-sizing of the mold and, accordingly, the variable-buoyancy structure.

29. (Canceled)

30. (Currently Amended) A platform ~~according to claim 28,~~ for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure,

wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein the mold provides the variable-buoyancy structure with a laterally extending shoulder around the periphery of the variable-buoyancy structure.

31. (Currently Amended) A platform ~~according to claim 28,~~ for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure,

wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein the mold also forms tapered projections that extend downwardly beneath the bottom of the structural cells, said projections being disposed near an outer edge of the variable-buoyancy structure.

32. (Original) A platform according to claim 28, wherein each forming cell includes a bottom opening for admitting air and a top opening.

33. (Currently Amended) A platform ~~according to claim 28,~~ for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure,

wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein the sidewall is readily detachable from the floatable platform.

34. (Currently Amended) A platform ~~according to claim 28,~~ for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure,

wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein the sidewall is hinged to the platform.

35. (Original) A platform according to claim 28, wherein both the forming cells and the structural cells are arranged in an array.

36. (Currently Amended) A platform ~~according to claim 28,~~ for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure, wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein at least some of the forming cells have detachable top surfaces.

37. (Original) A platform according to claim 36, further comprising a collapsible sack attached to at least one of the detachable top surfaces.

38. (Currently Amended) A platform ~~according to claim 28,~~ for fabricating a variable-buoyancy structure in the water, said platform comprising:

(a) means for providing said platform with a variable buoyancy that ranges from positive to negative buoyancy; and

(b) a plurality of forming cells surrounded by a sidewall that together form a mold for producing a variable-buoyancy structure,

wherein the variable-buoyancy structure that is formed by the mold has a plurality of structural cells corresponding to the plurality of forming cells, the structural cells having open bottoms, open interiors and inlet/outlet openings to the open interiors, said inlet/outlet openings being separate from the open bottoms, and

wherein at least some of the forming cells readily detach from the platform.

39. (Original) A platform according to claim 38, wherein at least some of the forming cells that readily detach from the platform have a fixed positive buoyancy when so detached.